

MINUTES USWBSI Steering Committee Meeting

Thursday, April 9, 2015, 8:15 AM – 4:15 PM CDT Ramada MSP Airport at the Mall

Co-Chair: Dave Van Sanford (Univ. of Kentucky)

Members Present: Jim Anderson (Univ. of Minnesota), Bill Berzonsky (Bayer CropScience, NE), Phil Bregitzer (USDA-ARS, ID), Doug Buehler (Michigan State Univ.), Xiwen Cai (North Dakota State Univ.), Mike Davis (American Malting Barley Association), Erick DeWolf (Kansas State Univ.), Ruth Dill-Macky (Univ. of Minnesota), Rich Horsley (North Dakota State Univ.), Dave Kendra (BASF, NC) H. Corby Kistler (UDSDA-ARS, MN; attending on behalf of JinRong Xu), Louis Kuster (ND Wheat Commission), Laird Larson (SD Wheat Commission), Don Mennel (Mennel Milling Co., OH), Esten Mason (Univ. of Arkansas), Eric Olson (Michigan State Univ.), Pierce Paul (Ohio State Univ.), Paul Schwarz (North Dakota State Univ.; attending on behalf of Jim Pestka), Carl Schwinke (Siemer Milling Co., IL), Mark Seastrand (ND Barley Council), Jochum Wiersma (Univ. of Minnesota), Shaobin Zhong (North Dakota State Univ.), and Marv Zutz (MN Barley Council)

Participated via Web Conference: Jody Jellison (Virginia Tech.)

Members not present: Art Brandli (Private Grower, MN), Bob Brunick (MillerCoors, ID), Bruce Freitag (ND Wheat Commission), Fred Kolb (Univ. of Illinois), Jolanta Menert (ABInBev, CO), Kevin Thorsness (Bayer CropScience, ND), and Brian Walker (formerly with Horizon Milling, MN)

USDA-ARS: Jose Costa (ADODR for the USWBSI); Participated via Web Conference **Staff:** Sue Canty (USWBSI-NFO, MI) and Don Lilleboe (Lilleboe Communications LTD., ND)

1. Opening Remarks and Introductions

2. Review and Approval of Agenda

Motion: Motion was made and seconded to approve the agenda as amended.

Discussion: None **Action:** Motion passed.

3. Review and Approval of Minutes from 12/09/14 Steering Committee (SC) Meeting

Motion: Motion was made and seconded to approve the minutes as amended.

Discussion: None **Action:** Motion passed.

4. Federal Funding and ARS Updates

Mike Davis summarized the handout (USWBSI FY2016 Programmatic Funding Request) that was distributed to the SC with the agenda, which detailed the NBIC and NWIC requests for \$3.67M

more in funding for Scab research. The 2014 Farm Bill authorizes \$10 Million for scab research for each fiscal year (2014 through 2018) covered by the Farm Bill.

Jose Costa updated the SC on the President's FY16 proposed budget for ARS in regards to Wheat and Barley research. For specifics, see Addendum A which was displayed during Dr. Costa's update.

5. **Updates from the NFO and EC**

- <u>Update on Economic Study</u> Drs. Wilson, Nganje and McKee presented an update on the Economic Study remotely from Fargo, ND. Due to technical difficulties, the sound quality was not consistent during the presentation. A copy of their PowerPoint presentation has been included with the minutes (Addendum B).
- <u>Projects in the Western States (ID and MT)</u> Dave Van Sanford updated the SC on the reassignments of all the 'Western' projects to other coordinated projects. The Western Coordinated Project (CP) originally came about in response to the increased frequency of Scab out west and concerns of stakeholders there, however, the concept of forming a CP around those states was not thoroughly discussed in the context of our overall CP structure, and longer term implications for the members of the western CP. The Cochairs proposed the following which was approved by the EC:
 - o The Integrated Management (IM) study at Univ. of Idaho was moved to the MGMT IM-CP.
 - o The two barley breeding projects (ID and MT) were moved to the BAR-
 - o The winter wheat breeding project at MT was moved to the HWW-CP; and
 - o The spring wheat breeding projects (ID and MT) were moved to the **VDHR-SPR CP**
- State Variety Surveys Following up with the breeder-pathologists breakout at the 2014 Forum, the NFO is working with breeders and pathologists in the Soft Winter Wheat states to establish support from state growers groups, millers, etc. to help with facilitating a short wheat survey. A web-based survey will be utilized whenever possible.
- Update on NASS Survey Christina Cowger presented an update on the NASS survey results via web conference from Raleigh, NC. Due to technical difficulties, the sound quality was not consistent during the presentation. A copy of Dr. Cowger's PowerPoint presentation has been included with the minutes (Addendum C).

6. **Review Proposed Changes to Policies & Procedures (P&P)**

Proposed change – Add the North American Millers' Association to the Steering Committee as an organizational representative.

Motion: Motion was made (Mike Davis) and seconded (David Kendra) to approve the proposed change as presented.

Discussion: None

Action: Motion passed.

<u>Proposed change</u> – Bring P&P in line with the Steering Committee's current meeting schedule. Old Language: The Steering Committee shall meet a minimum of twice a year, including one spring meeting and one meeting at the annual Forum.

New Language: The Steering Committee shall meet a minimum of once per year at the annual Forum. The Steering Committee will also meet in the spring prior to the distribution of the 'Call for Pre-Proposals' for a new two-year funding cycle.

Motion: Motion was made (Mike Davis) and seconded (Carl Schwinke) to approve the proposed changes as presented.

Discussion: None **Action:** Motion passed.

- 7. **Research Leaders Presentations** All research leaders were allocated 10 minutes to expend on their written research updates which were distributed with the meeting agenda. The PowerPoint presentations have been made available to the Steering Committee as part of the Working Cap process.
 - Barley CP Phil Bregitzer
 - Durum CP Shaobin Zhong
 - Hard Winter Wheat CP Bill Berzonsky
 - VDHR Spring Wheat Region CP Jochum Wiersma
 - VDHR Northern Soft Winter Wheat CP Eric Olson
 - VDHR Southern Soft Winter Wheat CP- Esten Mason
 - FHB Management Erick DeWolf
 - Food Safety and Toxicology Paul Schwarz
 - Gene Discovery and Engineering Resistance Nilgun Tumer
 - Pathogen Biology and Genetics H. Corby Kistler

8. FY16 Request for Pre-Proposals and Review Process

- Process and Timetable for setting FY16 Working Caps: The Steering Committee was presented with a proposed timetable (Addendum D) for setting the FY16-17 Working Caps following the procedure delineated in the P&P. Van Sanford stressed the importance of SC members to: 1) participate in the process; and 2) not be tied to historical allocations, but rather base their recommendation on what they think is best overall for the Initiative.
- Overview of FY16 Request for Pre-Proposals (RFP) Submission and Review: Dave Van Sanford informed the SC that the NFO did not foresee any major changes to the RFP submission and review process. However, it was mentioned at the last spring SC meeting (4-16-13) that a conference call between the NFO and research leaders would be beneficial. So, the NFO plans to hold conference a call with the Coordinated Project chairs prior to the deadline for receipt of Letters of Intent (LOIs) and with Research Area chairs prior to the start of their review process.
- **9. Review Proposed Changes to Action Plan** Van Sanford summarized the process that was followed by each group in developing their proposed changes:

MGMT – discussed during Forum breakout; Chair and Vice-Chair finalized

FST - discussed during Forum breakout; Chair and Vice-Chair finalized

GDER – discussed and finalized during Forum breakout

PBG – discussed and finalized during Forum breakout

VDHR – the three VDHR CP (SPR, NWW and SWW) finalized proposed changes to the action plan based on the SPR's and SWW's individual breakouts at the Forum. The proposed changes were then sent to the three Chairs of the Commodity-based CPs for their review/endorsement.

Motion: Motion was made (Bill Berzonsky) and seconded (Louis Kuster) to approve the proposed changes to MGMT, GDER, PBG and VDHR sections of the Action Plan as amended.

Discussion: Additional edits were suggested for the FST section of the Action Plan. The EC was charged with approving the final version of the changes to the FST section of the Action Plan.

Action: Motion passed.

- Small Discussion Groups The Steering Committee broke into four small groups to work on generating language and impact statements for the development of a document to be used for avocation of the USWBSI's importance and accomplishments.
- 11. Small Discussion Follow-up Each group read the impact statements their group drafted. The NFO will work up a document that combines all draft impact statements from all four groups, organized by category/research focus, and send to the SC. The EC was charged with the development a two page document to be presented to the SC at its December meeting.

12. 2015 and 2016 National FHB Forums

- 2015 National FHB Forum December 6-8, St. Louis, MO
 - o Program Format will follow same format as 2014 Forum: General Sessions, Poster Sessions, Flash & Dash Sessions and Breakouts. For the breakouts, the plan is to separate the 'business' component from the 'scientific' discussions by having separate business meetings.
 - o Forum Organizing Committee (FOC) Co-Chairs: Mike Davis and Ruth Dill-Macky agreed to continue serving as co-chairs of the FOC for the 2015 Forum.
 - o Schedule of USWBSI Administrative Meetings
 - SC meeting is on Tuesday, 12/8 following the close of the Forum
 - Research leaders (Chairs/Vice-Chairs) meet with the EC on Saturday, 12/5
 - EC –meetings begin on 12/4 and end with a short meeting directly following the SC meeting on 12/8.
 - o National Wheat Improvement Committee Meeting: Wednesday, 12/9.
- 2016 National FHB Forum EC selected dates and location: 12/4-6 in St. Louis, MO. The date selection was based on the timing of Thanksgiving and the Prairie Grains meeting which always begins on the second Wednesday of December.
- 13. New Items None

Meeting Adjourned: 3:41pm CDT

Submitted by:

Susan M. Canty, Manager

Susan M. Canty

USWBSI's Networking & Facilitation Office

ADDENDUM A

USDA-AGRICULTURAL RESEARCH SERVICE FUNDING UPDATE

ARS Wheat and Barley Research Information:

- **Small Grains Genotyping Centers**: All ARS laboratories received similar funding in FY15 compared to FY2014. For FY2016 a **\$500,000 increase for Fargo** is in the president's budget.
- **Aberdeen Small Grains Collection**: a \$500,000 increase is in the president's budget for barley and wheat databases linking to T3.
- **Nebraska ARS unit**: a \$450,000 increase is in the president's budget (Wheat component of High Throughput field-based phenotyping project: Graybosch).

Wheat and Barley Quality:

All laboratories have funding at post-sequestration reduction levels because no increases were afforded in the FY 2014 budget and no increases are projected in FY15 or FY16.

Overall USDA-ARS FUNDING:

	FY 2014 Enacted	FY 2015 Estimate	FY 2016 Proposed
Wheat Research	\$46,679,000	\$46,679,000	\$47,324,000
Barley Research	\$13,532,000	\$13,390,000	\$13,390,000

ADDENDUM B

Economic Impact of USWBSI's Impact on Reducing FHB

April 9, 2015 Fargo

Project Kick-Off Conf Call



By Dr. William W. Wilson University Distinguished Professor William.Wilson@ndsu.edu 701 231 7472

Dr. Gregg McKee

Dr. Wlliam Nganje



- Overview
- Project Objectives
- Obj: 1. Detailed discussion
- Obj: 2 Detailed Discussion
- Outstanding Issues
- Next Steps





Print Story

Printed from ChicagoBusiness.com

Oreos, vomitoxin and the price of wheat

By: MATT LEVINE April 03, 2015

Here's some stuff you don't want in your Oreos:

In order to produce usable flour, Kraft requires wheat for milling that meets certain specifications for baking and human consumption. These specifications include the permissible numbers of insect damaged kernels and maximum allowable levels of vomitoxin (a mycotoxin that may be produced in wheat infected by Fusarium head blight or scab). According to U.S. Food and Drug Administration guidance, finished baked goods must have a vomitoxin level below one part per million. Normal wheat milling processes and cleaning technologies can substantially reduce vomitoxin levels in finished flour by approximately one-half from the level in unprocessed wheat. Vomitoxin levels in finished flour also can be reduced in the milling process by blending in wheat possessing lower vomitoxim levels.

Now I'm no scientist, but I was pretty sure I wanted to limit my vomitoxin intake as soon as I saw the word "vomitoxin"; the explanation involving "head blight or scab" only reinforced the point. Kraft, which uses a lot of wheat, buys most of it directly from grain producers and wholesalers, and requires them to deliver wheat with "a maximum vomitoxin level of 2 parts per million and maximum insect damaged kernels of 3 per 100 grams" so that the milled flour meets FDA standards.



- 1) Estimate the economic value of crop losses suffered by wheat and barley producers without (1993 to 1996) and with (1997 to 2013) fungicide uses and some management practices;
- Estimate the economic value of crop losses suffered by U.S. wheat producers without (1993 to 1996) and with (1997 to 2013) moderate FHB resistant wheat varieties developed by universities funded by the initiative. This would include impacts of fungicide use and management practices from objective one. Economic value of crop loss from both time period will be used to estimate the benefits of the USWBSI;
- 3) End-use values of reduced scab will be derived. A focused survey of millers and malsters will be conducted to illicit benefits of the initiative for end-users;
- Estimate the secondary economic impacts of losses attributable to FHB with and without the initiative. The value of the USWBSI goes beyond production to other sectors in the economy (agribusiness industry, input supplies, trade, etc.). This will enable policy makers, industry representatives, and those in academia to evaluate the comprehensive economic value of the USWBSI for HRS only;
- 5) Use a modified internal rate of return (MIRR) approach to assess the return to investment on funding spent by the USWBSI.



Schedule of Research Activities

Date Completed	Primary Function	Comment
Year 1 Q1	Collect data for analysis Obj	
	1-3	
Year 1 Q2	Conduct analysis of Obj 1-3	
Year 1 Q3	Conduct analysis of Obj 1-3	
Year 1 Q4	Prepare results of Obj 1-3	
Year 2 Q1	Conduct analysis Obj 4-5	
Year 2 Q2	Prepare results Obj 4-5	
	Develop White Paper	
Year 2 Q3	Disseminate Results. Conduct	
	Conference Call with	
	USWBSI	



- Synopsis of literature will be extracted from the recent AACC
 - Focus on CODEX ML implications (attached)
- Multiple authors including
 Dr. Wilson on economic
 studies/impacts
- Other studies on technology, etc.

DON Occurrence in Cereal Grains: A North American Perspective

ABSTRACT

In agricultural commodities, the occurrence of deoxynivalenol (DON) has been reported all over the world, with levels varying amongst grain type and years of production. The grain supply chain including growers, buyers, and end users have effectively managed DON with strategies to control this issue systematically. The safety of consumers is ensured with these management strategies. This is observed in this review of the North American systems. This report describes the occurrence and management of DON in North America, which is accomplished by (1) review of the toxicological effects of DON; (2) review of publically available data and introduction of new information regarding the occurrence of DON in wheat, corn, and barley in North America including the variability due to growing regions, grain varieties, and the year of production; (3) overview of industry practices to reduce DON contamination from field through milling when necessary; (4) review of how all in the value chain, including growers, buyers, and end users have effectively managed DON for over 20 years; (5) description of current maximum limits (MLs) associated with DON; and (6) the economic impact of any potential changes in international regulations. This report focuses on wheat, corn, and barley grown in Canada and the USA, as these two countries are the major exporters of these grains in North America (Foreign Agricultural Service 2014 (1)).



Estimate the economic value of crop losses suffered by wheat and barley producers without (1993 to 1996) and with (1997 to 2013) fungicide uses and some management practices;

Link Yield and Management study

- Yield a function of incidence, severity, management
- Previous research of management adoption
 - Mail survey (NASS)
 - MN and ND wheat growers with at least 100 ac. wheat in 2010
 - 5150 producers
 - 1038 usable responses (20%)
 - Poisson regression
 - Adoption of number of techniques

Poisson Regression

- Model: Number of techniques =
 - Owned wheat
 - Yield
 - Employees
 - Extension, professional sources
 - Farm organization
 - education

Table 1. Estimated Results of Poisson Model

Parameter	Estimate	Standard Error
Intercept (Region7)	-0.94	0.187 ***
Region1	-0.012	0.043
Region2	0.211	0.049 ***
Region3	-0.021	0.049
Region4	-0.027	0.047
Region5	0.078	0.042 *
Region6	-0.053	0.082
$D_{wheatyield}$	0.098	0.025 ***
Extension	0.008	0.004 **
Empl	-0.011	0.006 **
$D_{benefits}$	0.196	0.043 ***
Ownership	-0.008	0.015
$D_{oldpubs}$	0.027	0.023
D_{farmorg}	-0.084	0.04 **
D_{degree}	0.224	0.168
$D_{\it twoyrinfo}$	0.161	0.039 ***
$D_{\it fouryrinfo}$	0.132	0.057 **

Note: ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.

Statistical model – management program effects on yield

- $-y_t$ is final wheat or barley harvest weight in grams
- Dummy variables represent each treatment combination from among any of the 31 possible combinations listed in questions 157-161 in the NASS survey observed in the studies provided by Paul
- Dummy variables represent each grain variety from among any of the n possible varieties observed in question 8 of the NASS survey and in the studies provided by Paul
- Incidence denotes percentage of ears infected with FHB
- Severity is the percentage of infected area of the ear
- Model yield as $y = \sum_{i=1}^{31} \delta_i + \sum_{i=1}^{n} \theta_i + \beta_1 Incidence + \beta_2 Severity + \varepsilon$
- Yield model useful to estimate discounts (grain price and application costs)

Data

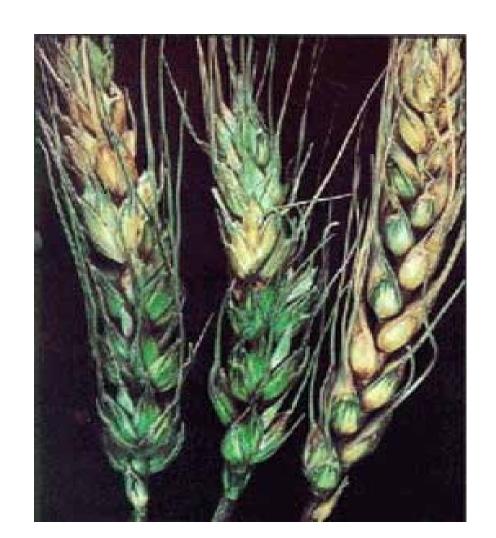
- Variety and management data similar to previous study NASS
 - National vs. MN/ND; time period
 - Request submitted Feb. 2015
 - Reply April 2015; awaiting delivery from NASS
- Yield and management data from field trials
 - Literature from Paul and others
 - Crafting data request of USWBSI data



Estimate the economic value of crop losses suffered by U.S. wheat producers without (1993 to 1996) and with (1997 to 2013) moderate FHB resistant wheat varieties developed by universities funded by the initiative.

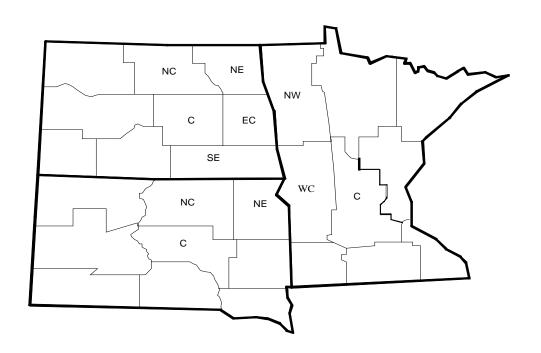
Outline

- Overview of Issue
- Review of our previous study
- Method for Current Study
 - Estimating reduction in yields
 - Estimating price effects
- Likely/expected output
- Data Status
- Plans: timing, etc.



CRDs included in Prior Study for HRS, Durum and Barley

- HRS, durum wheat, and barley affected areas
 - 11 CRDS in ND, SD, and MN



CRDs included in the SRW Wheat Survey

- SRW wheat affected areas
 - 27 CRDs in MI, MO, IL, IN, OH, KY

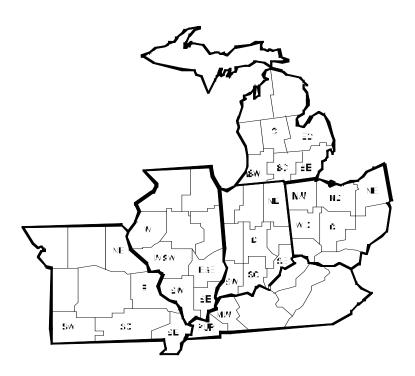


Figure 4. Crop Reporting Districts Included in Soft Red Winter Wheat Study Area

Issue

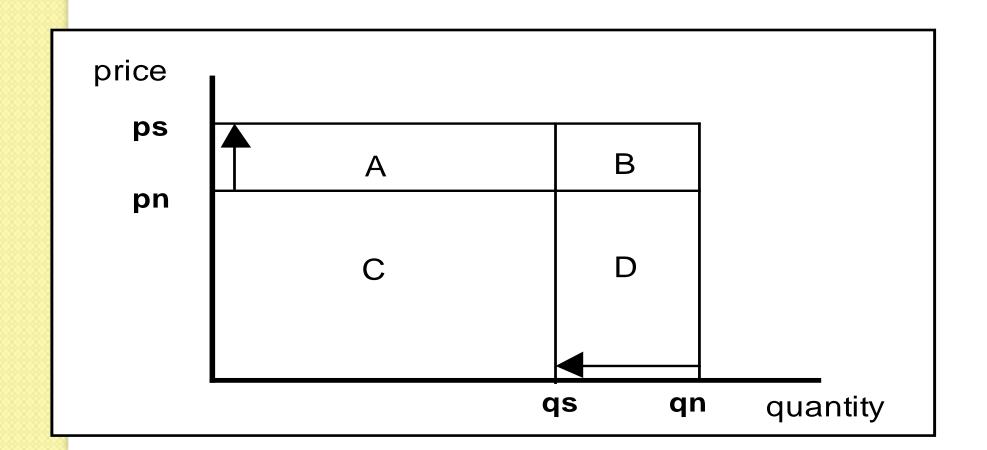
- Expanding CRDs to include all infected areas and Crops in the U.S.
- Developing new maps

Review of our Previous Study

- Objectives
 - Estimate direct and secondary economic losses due to scab
 - Estimate direct yield losses for HRS, durum, and SRW wheat and barley.
 - Estimate price losses or gains.
 - Estimate secondary economic losses to affected regional economies.

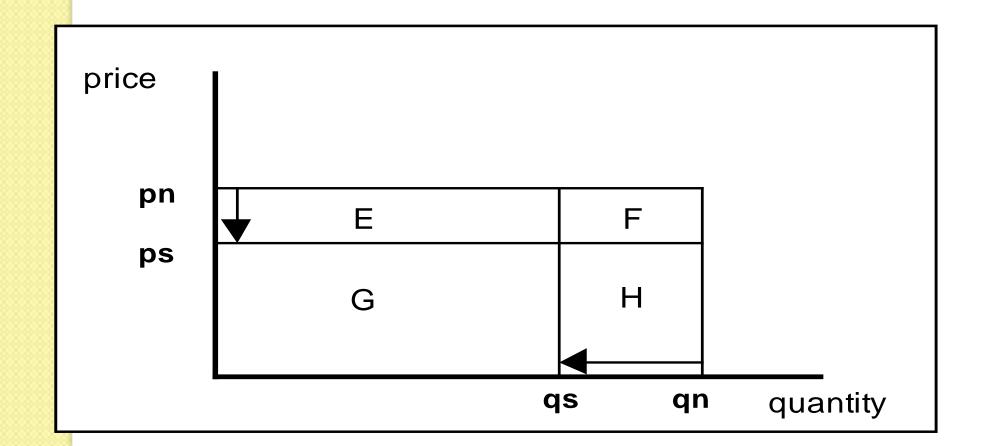
Change in Crop Value When Net Price Impact Is Positive

- Quantity Effect = (1/2B + D)
- Price Effect = (A + 1/2B)



Change in Crop Value When Net Price Impact Is Negative

- Quantity Effect = -(1/2F + H)
- Price Effect = -(E + 1/2F)



- Estimating reduction in yields: Yield Losses and abandoned acreage
 - Yield Losses = (Forecasted Yields with Scab-Forecasted Yields with no scab) * SF
 - Forecasted Yield = f(precipitation, temperature, and technology)
 - A separate regression equation for each CRD and wheat type and barley (60 regression equations).
 - Data from USDA publications: CRD data from 1970 -2000
 - Adjust yield losses for acreage abandoned
 - [(harvested acreage)/(planted acreage)]*SFa

- Estimating Price Effects: Futures and basis
 - Futures
 - 1. Actual futures prices
 - Futures price impact: production shortfall due to scab results in a price increase for all wheat depending on the magnitude of elasticity for that wheat class.
 - Elasticity is a percent relationship between price and quantity.
 - 2. Normal price
 - Olympic average price relationship between futures markets adjusted for trend (example: average from 1986 to 1992 of MGE for HRS and durum)
 - 3. Futures price effects = Normal Actual

- Basis
- Basis is the difference between the local cash price received and a futures price. Can be high or low depending on
 - Price premiums for high quality
 - Price discounts for low quality (DON levels could drop grade into feed category)
 - Distribution of crop quality
- Aggregate Price Effect
 - Futures and Basis, adjusted for imports from Canada

- Estimating Secondary Economic Impacts
 - The secondary economic effects were estimated using input-output (I-O) analysis (Leistritz et al. 1990).
 - The I-O model consists of 17 economic sectors and was developed from primary (survey) data from firms and households.

Results

- Estimates the economic value of crop losses suffered by U.S. wheat and barley producers without (1993 to 1996) the Initiative have been estimated for the CRDs presented.
- Estimate the economic value of crop losses suffered by U.S. wheat and barley producers with (1997 to 2014) the Initiative have been estimated for the CRDs presented for 1997 to 2000.
- Sample results are presented in Table 1.

Table 1. Production Losses Due to Fusarium Head Blight by State, Crop, and Year

State/Crop	Year			
	1998 1999		2000	Total
		000	0 bu	
		HRS		
ND	4,767.44	2,664.79	8,549.01	15,981.26
MN	3,381.36	4,119.48	3,719.16	11,220
SD	244.08	0.00	108.18	352.26
Total HRS	8,392.88	6,784.27	12,376.37	27,553.52
		Durum		
ND	706.56	3,942.64	4,556.92	9,206.12
MN	12.14	15.84	1.42	29.40
SD	-	-	-	-
Total Durum	718.70	3,958.48	4,558.34	9,235.52
		SRW		
${ m I\!L}$	2,111.89	226.99	449.78	2,788.65
IN	583.10	189.92	204.49	977.51
KY	306.52	352.03	725.39	1,383.93
MI	2,302.22	496.13	656.71	3,455.07
MO	286.64	138.78	599.27	1,024.67
OH	1,307.47	109.13	0	1,416.60
Total SRW	6,897.84	1,512.98	2,635.64	11,046.45
		All Classes of Wheat		
Total	16,009.42	12,255.72	19,570.35	47,835.48
		Barley		
ND	8,134.51	7,975.05	13,886.81	29,996.37
MN	7,679.00	2,373.04	2,490.10	12,542.14
SD	180.29	62.07	22.39	264.75
Total Barley	15,993.80	10,410.16	16,399.30	42,803.26

Summary and Other Scab Related Economic Research

Summary

- The findings indicate that scab continues to be a major problem for U.S. wheat and barley producers.
- The cumulative direct production and price impacts on producers from FHB in hard red spring (HRS), soft red winter (SRW), and durum wheat, and barley is estimated at \$870 million from 1998 through 2000.
- Direct impacts created secondary economic impacts on farm communities of \$1.8 billion in reduced economic activity.
- The total impacts of \$2.7 billion were concentrated in two states,
 North Dakota and Minnesota, which account for about 55
 percent of the total dollar losses over the three year period.



- Expand geography and class of wheat and barley
- Data sources
- Incorporate results from Obj 1 into the analysis
- Timing: Commencing summer 2015



- End-use values of reduced scab will be derived. A focused survey of millers and malsters will be conducted to illicit benefits of the initiative for end-users;
- 2) Estimate the secondary economic impacts of losses attributable to FHB with and without the initiative. The value of the USWBSI goes beyond production to other sectors in the economy (agribusiness industry, input supplies, trade, etc.). This will enable policy makers, industry representatives, and those in academia to evaluate the comprehensive economic value of the USWBSI for HRS only;
- 3) Use a modified internal rate of return (MIRR) approach to assess the return to investment on funding spent by the USWBSI.



ADDENDUMC USWBSI Survey of Wheat & Barley **Producers:**

Scab Management Techniques





Christina Cowger, USDA-ARS Plant Science Research Unit NCSU Department of Plant Pathology



NC STATE UNIVERSITY

Purpose of survey

- Assess importance of scab to wheat & barley producers
- Assess adoption of key scab management techniques
- Identify barriers to adoption
- Assess how well we are reaching producers, and by which methods

Timeline

- Fall 2012: Funding for survey approved
- January 2013: Workshop at NASS HQ to finalize 4-page questionnaire
- Feb 2014: OMB approval received
- March 2014: survey administered
- July 2014: original dataset delivered by NASS
- October 2014: data for 2nd KY sample received
- Summer-fall 2014: states divided into agronomic districts; cleaning began
- Currently: cleaning continues

Responses broken down by district within state

		Positive	Acreage			Positive	Acreage
	Sample	useables	covered		Sample	useables	covered
State	size	(%)	(%)	State	size	(%)	(%)
AR	448	18	2.7	NE	650	31	3.5
IL	748	38	3.2	NY	682	27	11.0
IN	649	38	3.9	NC	926	24	2.7
KS	1,240	34	2.4	ND	2,287	35	11.3
KY	750	21	3.9	ОН	947	44	3.7
MD	776	37	9.2	PA	1,119	40	6.2
MI	1,039	43	6.5	SD	1,445	25	10.0
MN	780	35	5.9	VA	854	17	2.9
MO	850	32	2.6	17 states	16,189	~33%	~6%

States divided into agronomic districts (between one and nine per state) – total of 71 districts among 17 states

Scab ratings on varieties reported by survey respondents

(nbrs of varieties)

Market Class	MR	MS	S	Unk	Total
HRW & HWW	16	34	24	59	133
SRW	70	62	46	27	205
SWW & SWS	8	4	9	1	22
DUR	1	8	12	2	23
HRS & HWS	23	28	15	4	70
BAR	6	7	15	53	81
Total					534

ADDENDUM D

Proposed Time Tables for Setting FY16 Working Caps/ Distribution and Submission of FY16 Pre-Proposals

Timetable for Setting FY16 Working Caps (WC)

Voting ends

May 5	Poll 1 begins
May 15	Poll 1 ends
May 19	Discussion Period opens
June 2	Discussion Period closes
June 4	Poll 2 begins
June 16	Poll 2 ends
June 22-July 3	EC conference call to finalize recommendation
July 7	SC voting on recommended WCs begins

Timetable for FY16 Request for Pre-Proposals* (Submission and Review)

Tillietable for FT	to Request for Fie-Froposais (Submission and Review)
June 8	Distribution of Request for Pre-Proposals (RFP).
July 8	Deadline for submission of Letters of Intent (LOIs) – All Coordinated Projects (CPs)(Category 1 & 2).
July 20	Electronic Pre-Proposal Submission (EPS) System Pre-Registration Opens.
Aug 7	CP Chairs (Cat. 1 & 2) notify Principal Investigators (PIs) who submitted LOI whether their project has been accepted into CP.
Aug 31	EPS Pre-registration Closes
Sept. 11	ALL PRE-PROPSALS ARE DUE.
	CPs (Cat.1 & 2): PIs submit Proposed Research Projects (PRPs) to CP Leaders (Cc: NFO) via email.
	Research Areas (RAs): PIs submit individual RA-based pre-proposals (Cat. 3) via EPS.
	ALL PIs upload supporting docs to EPS System.
Sept. 22	RA Pre-Proposals distributed to Review Panels (RP).
Sept. 24	RA Pre-Proposals distributed to EC.
Sept. 30	Review Panels finalized for CPs (Cat. 1 only).
Oct. 9	CP Chairs (Cat. 1 & 2) submit final CP Pre-Proposal to NFO via email.
	RA RP Chairs submit Pre-Review Checklist to NFO.
Oct. 14	CP Pre-Proposals distributed to Review Panels and EC.
Nov. 20	Individual Reviews for RA Pre-Proposals (Cat. 3) due into NFO.
Nov. 25	RA RP's Overall Summaries due into the NFO (Cat. 2-3).
	CP (Cat. 1-2) RPs' Executive Summaries due into the NFO.
Nov. 30	RA and CP RPs' recommendation distributed to the EC.
	RA RP (Cat. 2-3) Chairs' Working Spreadsheets due into the NFO.

July 17

^{*} Pre-Proposal Categories

^{1 =} Commodity-based and VDHR Coordinated Projects

^{2 =} MGMT Coordinated Projects

^{3 =} Research Area based projects